

NASA's Radiation Belt Storm Probe Mission

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NASA's Radiation Belt Storm Probe (RBSP) mission, comprising two identically-instrumented spacecraft, is scheduled for launch in May 2012. In addition to identifying and quantifying the processes responsible for energizing, transporting, and removing energetic particles from the Earth's Van Allen radiation, the mission will determine the characteristics of the ring current and its effect upon the magnetosphere as a whole. The distances separating the two RBSP spacecraft will vary as they move along their 1000 km altitude x 5.8 RE geocentric orbits in order to enable the spacecraft to separate spatial from temporal effects, measure gradients that help identify particle sources, and determine the spatial extent of a wide array of phenomena. This talk explores the scientific objectives of the mission and the manner by which the mission has been tailored to achieve them.